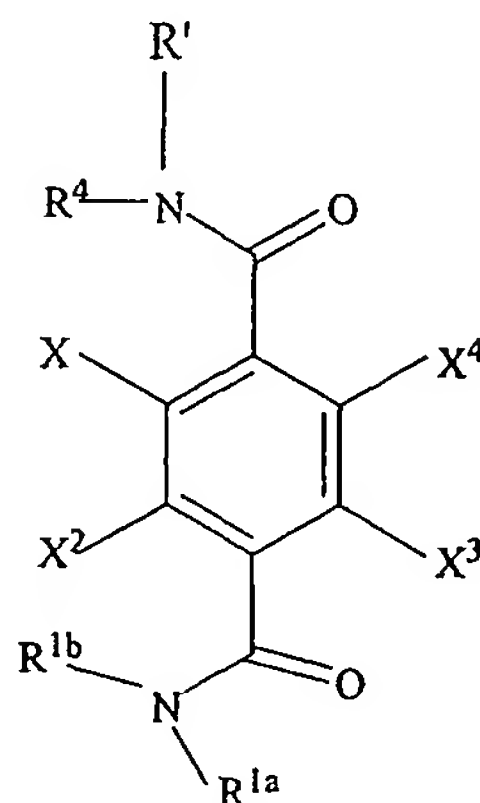


## Claims:

- 5 1. A compound or its pharmaceutically acceptable salt of the formula:



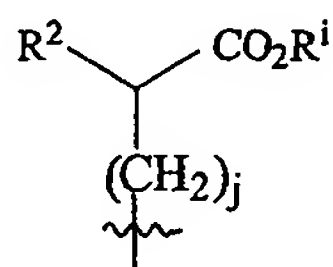
I

where X is H, halogen (F, Cl, Br, I), R, OR, SR or NR<sup>c</sup>R<sup>d</sup>;

- 10 X<sup>2</sup>, X<sup>3</sup> and X<sup>4</sup> are each independently selected from H, halogen, OH, R<sup>e</sup> or OR<sup>e</sup>,

R<sup>4</sup> is H, an unsubstituted or substituted C<sub>1</sub>-C<sub>8</sub> alkyl or alkene, or an unsubstituted or substituted C<sub>1</sub>-C<sub>6</sub> alkylene amine;

R' is H, an unsubstituted or substituted C<sub>1</sub>-C<sub>8</sub> alkyl or alkene, an unsubstituted or substituted C<sub>1</sub>-C<sub>6</sub> alkylene amine, or a



15

group,

where R<sup>i</sup> is H or C<sub>1</sub>-C<sub>4</sub> alkyl; j is 0, 1 or 2;

- 20 R<sup>2</sup> is independently H, an unsubstituted or substituted hydrocarbon, an unsubstituted or substituted alkoxy, unsubstituted or substituted ester, an unsubstituted or substituted alkanol, an unsubstituted or substituted alkanoic acid, an unsubstituted or substituted thioester, an unsubstituted or substituted thioether, an unsubstituted or substituted amine, an unsubstituted or substituted mono- or dialkylamide, an substituted or unsubstituted alkylene amide, an unsubstituted or substituted alkyleneamine; or

)

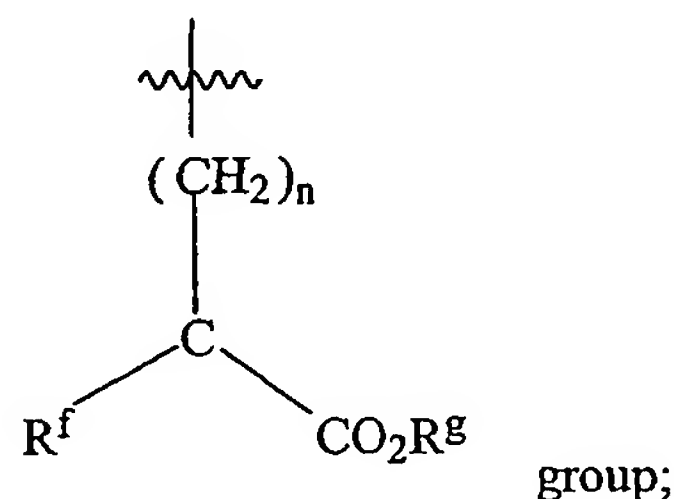
R' together with the nitrogen atom to which R' is attached form an amino acid residue;

R is H, an unsubstituted or substituted C<sub>1</sub>-C<sub>10</sub> alkyl or acyl group, an unsubstituted or substituted aryl, heteroaryl, alkylene aryl or alkylene heteroaryl group;

5 R<sup>c</sup> and R<sup>d</sup> are independently H, C<sub>1</sub>-C<sub>6</sub> alkyl, a C<sub>1</sub>-C<sub>6</sub> alkanol or a C<sub>1</sub>-C<sub>6</sub> acyl group with the proviso that if one of R<sup>c</sup> or R<sup>d</sup> is an acyl group, the other of R<sup>c</sup> or R<sup>d</sup> cannot also be an acyl group;

R<sup>e</sup> is an unsubstituted or substituted C<sub>1</sub>-C<sub>6</sub> alkyl or acyl group, or an unsubstituted or substituted aryl or alkylene aryl group;

10 R<sup>1a</sup> and R<sup>1b</sup> are each independently H, unsubstituted or substituted C<sub>1</sub>-C<sub>8</sub> alkyl or alkene, an unsubstituted or substituted aryl or alkylene aryl group, a C<sub>1</sub>-C<sub>6</sub> alkylene amine which is optionally substituted with one or two C<sub>1</sub>-C<sub>4</sub> alkyl groups, a



Where R<sup>g</sup> is H or C<sub>1</sub>-C<sub>6</sub> alkyl;

15 n is 0, 1 or 2; and

R<sup>f</sup> is H, an unsubstituted or substituted hydrocarbon, an unsubstituted or substituted alkoxy, an unsubstituted or substituted ester, an unsubstituted or substituted alkanol, an unsubstituted or substituted alkanoic acid, an unsubstituted or substituted thioester, an unsubstituted or substituted thioether, an unsubstituted or substituted amine, an unsubstituted or substituted mono- or dialkylamide, an substituted or unsubstituted alkylene amide, an unsubstituted or unsubstituted alkyleneamine or an alkylene guanidine group; or

20 R<sup>1a</sup> and R<sup>1b</sup>, together with the nitrogen atom to which R<sup>1a</sup> and R<sup>1b</sup> are attached, form an amino acid residue.

25 2. The compound according to claim 1 wherein R<sup>4</sup> is H and R' together with the nitrogen to which R' is attached form an α- amino acid residue.

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3. The compound according to claim 1 or 2 wherein  $R^4$  is H and  $R'$  together with the nitrogen to which  $R'$  is attached form an amino acid residue obtained from alanine, arginine, asparagine, aspartic acid, cysteine, glutamine, glutamic acid, glycine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, praline, serine, threonine, tryptophan, tyrosine or valine.

4. The compound according to claim 1 wherein  $R^2$  is an unsubstituted or substituted alkyl or aryl group, an unsubstituted or substituted alkoxy or ester group, an unsubstituted or substituted alkanol or alkanoic acid, an unsubstituted or substituted  $C_1$ - $C_6$  thioether, an unsubstituted or substituted amine, an unsubstituted or substituted alkylamide or alkylene amide or an alkylenguanidine group.

5. The compound according to any of claims 1-4 wherein  $R^{1a}$  and  $R^{1b}$  together with the nitrogen to which they are attached form an  $\alpha$ -amino acid residue.

6. The compound according to any of claims 1-4 wherein  $R^{1a}$  and  $R^{1b}$  together with the nitrogen to which they are attached form an amino acid residue obtained from alanine, arginine, asparagine, aspartic acid, cysteine, glutamine, glutamic acid, glycine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, praline, serine, threonine, tryptophan, tyrosine or valine.

7. The compound according to any of claims 1-6 wherein  $R^4$  and X form a hydrogen bond.

8. The compound according to any of claims 1-7 wherein X is H, OR, SR or  $NR^cR^d$ .

9. The compound according to any of claims 1-8 wherein X is OR.

10. The compound according to claim 8 or 9 where R is an alkyl or aryl group.

11. The compound according to claim 10 wherein R is a  $C_1$ - $C_4$  alkyl group.

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12. The compound according to any of claims 1-8 wherein R<sub>c</sub> and R<sub>d</sub> are independently H, C<sub>1</sub>-C<sub>3</sub> alkyl or C<sub>1</sub>-C<sub>3</sub> alkanol.

13. The compound according to any of claims 1-12 wherein X<sup>2</sup>, X<sup>3</sup> and X<sup>4</sup> are each independently H.

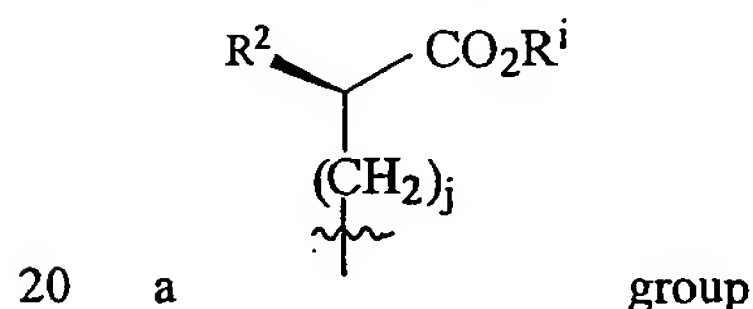
14. The compound according to any of claims 1-13 wherein X is an OR group and R is a C<sub>1</sub>-C<sub>3</sub> alkyl group or an unsubstituted or substituted aryl or alkylene aryl group.

15. The compound according to any of claims 1-4 and 7-14 wherein R<sup>1a</sup> and R<sup>1b</sup> are each independently H, C<sub>1</sub>-C<sub>4</sub> alkyl or an unsubstituted or substituted aryl group.

16. The compound according to claim 15 wherein said aryl group is a benzyl or unsubstituted phenyl group.

17. The compound according to any of claims 1-16 wherein R<sup>e</sup> is a C<sub>1</sub>-C<sub>3</sub> alkyl group.

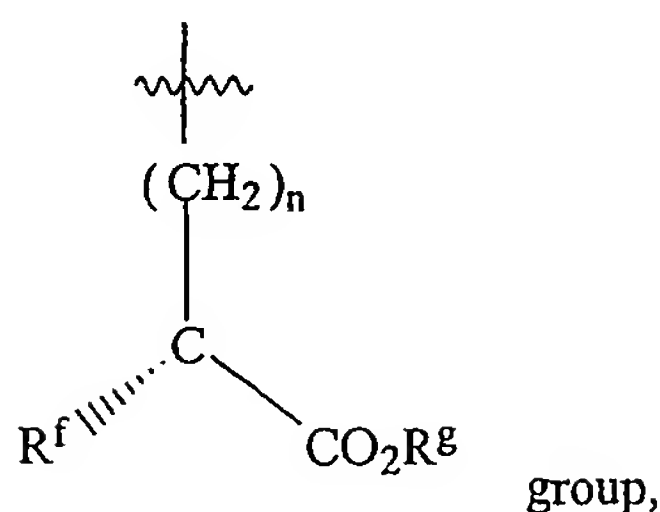
18. The compound according to any of claims 1 and 4-17 where R' is



wherein j is 0; R<sup>i</sup> is H or C<sub>1</sub>-C<sub>3</sub> alkyl; and

R<sup>2</sup> is an unsubstituted or substituted alkyl or aryl group, an unsubstituted or substituted alkoxy or ester group, an unsubstituted or substituted alkanol or alkanoic acid, an unsubstituted or substituted C<sub>1</sub>-C<sub>6</sub> thioether, an unsubstituted or substituted amine, an unsubstituted or substituted alkylamide or alkylene amide or an alkylenguanidine group.

19. The compound according to any of claims 1-4 and 7-18 wherein either of R<sup>1a</sup> or R<sup>1b</sup>, but not both, is a



wherein  $\text{R}^g$  is H or  $\text{C}_1$ - $\text{C}_4$  alkyl;

$n$  is 0, 1 or 2; and

$\text{R}^f$  is H, an unsubstituted or substituted hydrocarbon, unsubstituted or substituted alkoxy,

- 5 unsubstituted or substituted ester, an unsubstituted or substituted alkanol, an unsubstituted or substituted alkanoic acid, an unsubstituted or substituted thioester, an unsubstituted or substituted thioether, an unsubstituted or substituted amine, an unsubstituted or substituted alkylamide, an unsubstituted or substituted alkylene amide, an unsubstituted or substituted alkyleneamine, an unsubstituted or substituted alkylenguanidine.

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20. The compound according to any of claims 1-4 and 7-19 wherein  $n$  is 0.

21. The compound according to any of claims 1-4 and 7-20 wherein  $\text{R}^g$  is H.

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22. The compound according to any of claims 1-21 wherein  $\text{R}^4$  is H and X is a hydrogen bond acceptor group.

- 20 22. A pharmaceutical composition comprising an effective amount of a compound according to any of claims 1-21 in combination with a pharmaceutically acceptable carrier, additive or excipient.

- 25 23. A method of treating, preventing or reducing the likelihood of a condition or disease state in a patient, said condition or disease state being modulated through the interaction of an  $\alpha$ -helical protein with a binding site of said protein, said method comprising administering to a patient in need of therapy an effective amount of one or more compounds according to claim 1, optionally in a pharmaceutically acceptable carrier, additive or excipient.

24. The method according to claim 23 wherein said condition or disease state is selected from the group consisting of viral infections, (including Hepatitis B virus (HBV) infections, human immunodeficiency virus (HIV) infections or conditions associated with such infections (AIDS), Herpes Simplex virus infections (HSV) infections, tumors and/or  
5 cancer, proliferative diseases including psoriasis, genital warts and hyperproliferative keratinocyte disease including hyperkeratosis, ichthyosis, keratoderma, lichen planus, hypertension, neuronal disorders, asthma, autoimmune diseases including lupus (lupus erythematosus), multiple sclerosis, arthritis, including rheumatoid arthritis, rheumatic diseases, fibromyalgia, Sjögren's disease and Grave's disease and neurodegenerative diseases  
10 including Alzheimer's disease and Parkinson's disease.

25. The method according to claim 24 wherein said viral infection is a Hepatitis B virus (HBV) infection, a human immunodeficiency virus (HIV) or a Herpes Simplex virus (HSV) infection.  
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26. The method according to claim 24 wherein said hyperproliferative keratinocyte disease is selected from the group consisting of hyperkeratosis, ichthyosis, keratoderma and lichen planus.

27. The method according to claim 24 wherein said autoimmune disease is selected from the group consisting of lupus erythematosus, multiple sclerosis, arthritis, rheumatic diseases, fibromyalgia, Sjögren's disease and Grave's disease.  
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28. The method according to claim 24 wherein said neurodegenerative disease is selected from the group consisting of Alzheimer's disease and Parkinson's disease.  
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29. The method according to claim 24 wherein said disease or condition is selected from the group consisting of attention deficit disorder, memory loss, language disorder and learning disorder.  
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30. A method of inhibiting a calmodulin dependent phosphodiesterase enzyme in a patient, said method comprising administering said patient and effective amount of a

compound according to claim 1, optionally in combination with a pharmaceutically acceptable additive, carrier or excipient.

31. A method of inhibiting Bcl-X<sub>L</sub> in a patient, said method comprising administering  
5 to said patient an effective amount of a compound according to claim 1 to said patient.

32. A method of inhibiting cellular invasion of a virus in a patient, said method comprising administering to said patient an effective amount of a compound according to claim 1 to said patient.

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33. The method according to claim 32 wherein said virus is selected from the group consisting of HIV, HSV and HBV.

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